

Ford Motor Company

SR-16 Removal Summary Report

Ringwood Mines/Landfill Superfund Site

Ringwood, New Jersey

June 2015



**SR-16 Removal Summary
Report**

A handwritten signature in blue ink that appears to read "Deric T. Kearns".

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Ringwood Mines/Landfill
Superfund Site
Ringwood, New Jersey

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1. Introduction

ARCADIS U.S., Inc. (ARCADIS), on behalf of Ford Motor Company (Ford), has prepared this *SR-16 Removal Summary Report* (Report) for the Ringwood Mines/Landfill Superfund Site located in the Borough of Ringwood in Passaic County, New Jersey (Site; Figure 1).

In April 2013, additional paint waste was discovered in an area south of Margaret King Avenue near the intersection of Peter's Mine Road—this area is referred to as removal area SR-16.

This Report summarizes the activities completed per the Work Plan, including the completion of the removal action and restoration activities at SR-16.

1.1 Site Description

The area subject to the paint waste removal actions conducted at SR-16 is the area south of Margaret King Avenue (Figure 2).

1.2 Report Organization

The remainder of this Report is organized as follows:

- Section 2- Test Trenches – describes test trenching activities implemented to verify the limits of excavation
- Section 3 –Waste Removal – describes paint waste removal activities including removal, confirmation sampling and restoration.
- Section 4 Summary and Conclusions – presents a summary of the work and key conclusions about the data and acquired information.
- Section 4 References – lists documents used in preparation of this Report.

The field activities were completed as described in the USEPA-approved Work Plan and Work Plan Addendum (ARCADIS 2013, 2014). ARCADIS completed these activities between June 2014 and November 2014.

2. Test Trenches

Test trenching activities were conducted from June 12 through June 26, 2014 in accordance with the Work Plan and Work Plan Addendum (ARCADIS 2013, 2014) and based on the Soil Erosion and Sediment Control Plan (SESCP) Addendum dated June 24, 2014 (original SESCP dated November 22, 2013) as approved by the Hudson Essex Passaic Soil Conservation District (HEPSCD). Prior to the implementation of test trenching activities, SESCP measures were installed including silt fence and a stabilized construction entrance. SESCP site preparation installation activities and test trenches activities were conducted by Denovo Constructors, Inc. (Denovo) under the direct oversight of ARCADIS. A total of ten test trenches were completed (Figure 3):

- Test trenches TT-1 and TT-2 were completed on June 12, 2014 outside the western boundary of SR-16.
- Test trenches TT-3 through TT-7 were completed on June 13 and June 16, 2014 within the SR-16 boundary.
- Test trenches TT-AOI 1-1, TT-AOI 1-2, and TT-AOI 1-3 were completed on June 26, 2014 south of Mine Brook to further investigate a mounded area bordering an open field (outside the SR-16 boundary) as requested by USEPA and defined in the Work Plan Addendum (ARCADIS 2014).

Test Trenches TT-1 through TT-7

Test trenches TT-1 and TT-2 were excavated down to bedrock at depths of 8 feet and 5 feet bgs, respectively. Soils were continuously screened using a photoionization detector (PID) and readings were non-detected in both of the trenches. TT-1 included surficial organics underlain by sandy silt with pebbles, cobbles, and roots. Mine tailings were observed in test trench TT-2 at a depth of 0 to 1 foot bgs underlain by silt with some cobbles. Soils excavated from the individual test trenches were deemed clean of paint waste and any other observable impacts by field staff. Both test trenches were subsequently backfilled with the excavated soils in the same order as the soil was removed and graded to match existing grade. Test trench logs are in Appendix B.

In June 2014, the top of a former underground storage tank (UST) was identified approximately 20 feet west of TT-2 near the west property line of Lot 3 (Church Property). The top of the UST was very close to ground surface and was identified during the installation of the contractor's temporary construction trailer near the former

stone construction entrance at Margaret King Boulevard. The tank measured approximately 4 feet in diameter by 11 feet long and was believed to be a No. 2 oil UST that was previously used for heating the former church. Based on a review of historical site maps, the former church was the only development/structure adjacent to the UST location. The tank was noted to contain approximately 2.5 feet of water. There was no evidence of groundwater or indications of soil impacts in TT-2. The Four 2-inch diameter threaded ports located on the top of the UST were sealed using Fernco compression plugs and the UST was covered with polyethylene sheeting, demarcated, and covered with clean fill material. Documentation of the UST was provided to the USEPA in an email correspondence dated July 15, 2014. Photo documentation of the UST is in Appendix A.

Test trenches TT-3 through TT-7 were excavated down to bedrock, which ranged from depths of 7 to 11 feet bgs. Test trenches TT-3, TT-4, and TT-5 were excavated to depths of 7 to 10 feet bgs. Soils were continuously screened using a PID and all readings were non-detect. Soils excavated from the three test trenches were deemed clean of paint waste and any other observable impacts by field staff. Test trenches TT-3 through TT-7 all had surficial organics [do you mean leaf debris or surficial paint pieces?] underlain by silt and sandy silts with cobbles and pebbles. Test trenches TT-6 and TT-7 were observed to have dried paint waste pieces at ground surface. Dried paint waste pieces in these areas (approximately 1 to 3 inches in diameter) were collected and drummed before any excavation activities were conducted. Two 6-inch deep cuts were conducted within the first foot of the excavation to visually check soils for the presence of paint waste. No paint waste was observed within the first 6-inch cut. Test trenches TT-6 and TT-7 were excavated down to depths of 7 and 11 feet bgs. Soils were continuously screened using a PID and readings were non-detect. Soils excavated from the two test trenches were deemed clean of paint waste and any other observable impacts by field staff.

Test Trenches TT-AOI 1-1, TT-AOI 1-2, and TT-AOI 1-3

Test trenches TT-AOI 1-1, TT-AOI 1-2, and TT-AOI 1-3 were completed to further investigate a mounded area bordering an open field south of Mine Brook. The area was noted during the Spring 2014 field reconnaissance survey when less than 10 surficial pieces of paint waste measuring less than 3 inches in diameter were found. The Work Plan Addendum was prepared following an onsite meeting with USEPA and subsequent discussions about the locations of the test pits in this area. The Work Plan Addendum describes the completion of these three test trenches and two additional test pits on a contingent basis if paint waste is encountered within the mounded areas

during the completion of TT-AOI 1-1, TT-AOI 1-2, and TT-AOI 1-3. If you are going to discuss these in this report, then we need to have a figure that shows their locations.

After perimeter silt fence was installed around the proposed trench locations, the test trenches were excavated to 10 feet bgs, and the soils were screened with a PID and logged by a field geologist. All soils excavated from these test trenches were deemed clean of paint waste and any other observable impacts by field staff, backfilled in the same order as the soil was removed and graded. No PID readings were detected during trenching activities and the test trench logs are in Appendix B.

TT-AOI 1-1 and TT-AOI 1-2 were located southeast of SR-16 in Lot E (2.14) adjacent to each other to encompass the area identified during the field reconnaissance survey. Both trenches bisected the sloped grade away from Mine Brook with total depth varying due to the change in grade towards the east in addition to drastic changes in bedrock topography. Both trenched soils were similar due to their close proximity and included a surficial organics and roots horizon underlain by very fine to coarse sand mixed with granules, pebbles, cobbles, and boulders.

TT-AOI 1-3 was located north of the culvert and closer to Mine Brook. Due to the amount of surficial boulders along the banks of Mine Brook, the field team adjusted the location of the test trench more perpendicular to Mine Brook to minimize stress on the smaller excavator and disturbance along the floodplain. The subsurface soil was similar to the other trenches, but included many surficial boulders intermixed with organics and roots, which was underlain by very fine to coarse sand mixed with granules, pebbles, cobbles, and boulders.

All three trenches were clean of impacts and additional contingent proposed test trenches defined in the Work Plan Addendum (ARCADIS 2014) were not necessary based on field observations in the initial three required test trenches. All areas of disturbance were graded to original ground surface elevations, seeded and mulched for erosion control purposes. Test trench logs are in Appendix B.

3. SR-16 Waste Removal

A Soil Erosion and Sediment Control Plan (SESCP) dated November 22, 2013 was previously approved by the Hudson Essex Passaic Soil Conservation District (HEPSCD) covering soil excavation activities. SESCP measures including the installation of silt fence and stabilized construction entrance were installed at the site prior to any intrusive excavation activities. During field reconnaissance activities, small

paint chips on the surface were removed via a bucket and stockpiled for offsite disposal. A shallow excavation was subsequently conducted on June 19 and 20, 2014 by Denovo under the direct oversight of ARCADIS to confirm removal of the surficial dried paint waste observed in the eastern portion of SR-16 (observed during both the initial field reconnaissance activities with limits defined via the advancement of test trenches TT-6 and TT-7). The excavation was completed to a depth of 0.5 to 1.0 feet bgs over an area of approximately 6,500 square feet between test trenches TT-5 to TT-7. The limits of the excavation are depicted on Figure 4. A photographic log documenting the removal actions is provided as Appendix A.

During excavation activities, soils were continuously screened with a PID and readings were non-detect. Some paint pieces were sporadically found in the upper 6-inches of the excavation (approximately 2 to 3 inches in diameter) and were removed with the excavated soils.

Approximately 230 cubic yards (cy) of soil was transported to a temporary soil staging area at the end of Peters Mine Road where the material was staged on and covered with 20 mil polyethylene sheeting. Appendix C presents the as-built drawing detailing the excavation limits and bottom of excavation elevations. The stockpiling and staging area was secured with hay bales around the perimeter for soil erosion and sediment control purposes. A waste characterization sample was collected on June 20, 2014. The results of this sample were non-hazardous. The waste characterization analytical results data package is in Appendix D.

Post-excavation soil samples were collected on June 20, 2014. A total of seven soil samples (designated SR16-SS-B1-0.5-1.0 through SR16-SS-B7-0.5-1.0) were collected at a depth of 0.5 to 1.0 bgs at a frequency of one sample per 900 square feet of excavation area. Soil samples were analyzed for volatile organic compounds, semivolatile organic compounds, polychlorinated biphenyls and metals. Post-excavation soil sampling locations and results are provided on Figure 5 and summarized on Table 1. The full analytical data package is in Appendix E. The data validation package is included as Appendix F.

Post-excavation soil sampling results are all below the New Jersey Department of Environmental Protection default impact to groundwater criteria and residential direct contact criteria with the exception of estimated concentrations of aluminum and manganese that were similar to site-specific background concentration summarized on Table 2. Estimated aluminum concentrations ranged from 8,800 milligrams per kilogram (mg/kg) to 17,900 mg/kg and estimated manganese results ranged from 252

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mg/kg to 471 mg/kg. Both of these ranges are similar to site-specific background and therefore, no additional sampling or removal action was proposed. The USEPA verbally approved this position.. On September 29 and 30, 2014 the stockpiled soil (161.73 tons) was disposed off-site to the IESI landfill in Bethlehem, Pennsylvania. Copies of the non-hazardous soil disposal manifests to IESI landfill are in Appendix G. Site restoration activities were completed in October 2014 with the placement of topsoil that was vegetated in accordance with the SESCP. A final restoration topographic as-built drawing is in Appendix H. Topsoil analytical data results are in Appendix I. Following the establishment of vegetative growth, silt fence and temporary fencing were removed from the Site in November 2014.

4. Summary and Conclusions

The SR-16 removal actions included the removal of dried paint waste pieces that were visually identified at ground surface within the SR-16 area. A shallow excavation was completed throughout the delineated area to conservatively remove any additional potential dried paint waste. The removal actions were successfully completed as confirmed by visual findings and post-excavation soil sampling results that were in compliance with the NJDEP residential direct contact soil remediation standards.

5. References

ARCADIS. 2013. Supplemental Reconnaissance Survey Work Plan. August 2013.

ARCADIS. 2014. Addendum to the Supplemental Reconnaissance Work Plan. May 2014.

Tables

Table 1
Post-Excavation Results for SR-16 Removal Action

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Location ID	New Jersey Residential Direct Contact	New Jersey Default Impact to Groundwater Soil Screening Levels	Units	SR16-SS-B1 SR16-SS-B1-0.5-1.0 6/20/2014 Final	SR16-SS-B2 SR16-SS-B2-0.5-1.0 6/20/2014 Final	SR16-SS-B3 SR16-SS-B3-0.5-1.0 6/20/2014 Final	SR16-SS-B4 SR16-SS-B4-0.5-1.0 6/20/2014 Final	SR16-SS-B5 SR16-SS-B5-0.5-1.0 6/20/2014 Final	SR16-SS-B6 SR16-SS-B6-0.5-1.0 6/20/2014 Final	SR16-SS-B7 SR16-SS-B7-0.5-1.0 6/20/2014 Final	SR16-SS-B7 DUP-062014 6/20/2014 Final	
Volatile Organic Compounds												
1,1,1-Trichloroethane	290	0.3	mg/kg	< 0.00014	< 0.00016	< 0.00014	< 0.00015	< 0.00015	< 0.00015	< 0.00012	< 0.00012	
1,1,2,2-Tetrachloroethane	1	0.007	mg/kg	< 0.00021	< 0.00024	< 0.00021	< 0.00024	< 0.00023	< 0.00023	< 0.00019	< 0.00019	
1,1,2-Trichloroethane	2	0.02	mg/kg	< 0.00021	< 0.00025	< 0.00022	< 0.00024	< 0.00023	< 0.00024	< 0.00019	< 0.00019	
1,1-Dichloroethane	8	0.2	mg/kg	< 0.00018	< 0.00021	< 0.00018	< 0.00020	< 0.00019	< 0.00020	< 0.00016	< 0.00016	
1,1-Dichloroethylene	11	0.008	mg/kg	< 0.00027	< 0.00031	< 0.00027	< 0.00030	< 0.00029	< 0.00029	< 0.00024	< 0.00023	
1,2,4-Trichlorobenzene	73	0.7	mg/kg	< 0.00017	< 0.00020	< 0.00018	< 0.00020	< 0.00019	< 0.00019	< 0.00016	< 0.00015	
1,2-Dibromo-3-Chloropropane (DBCP)	0.08	0.005	mg/kg	< 0.00038	< 0.00043	< 0.00038	< 0.00043	< 0.00041	< 0.00042	< 0.00034	< 0.00033	
1,2-Dibromoethane	0.008	0.005	mg/kg	< 0.00018	< 0.00020	< 0.00018	< 0.00020	< 0.00019	< 0.00019	< 0.00016	< 0.00015	
1,2-Dichlorobenzene	5300	17	mg/kg	< 0.00018	< 0.00021	< 0.00018	< 0.00021	< 0.00020	< 0.00020	< 0.00016	< 0.00016	
1,2-Dichloroethane	0.9	0.005	mg/kg	< 0.00025	< 0.00028	< 0.00025	< 0.00028	< 0.00026	< 0.00027	< 0.00022	< 0.00022	
1,2-Dichloropropane	2	0.005	mg/kg	< 0.00017	< 0.00019	< 0.00017	< 0.00019	< 0.00018	< 0.00018	< 0.00015	< 0.00015	
1,3-Dichlorobenzene	5300	19	mg/kg	< 0.00019	< 0.00022	< 0.00019	< 0.00021	< 0.00020	< 0.00021	< 0.00017	< 0.00017	
1,4-Dichlorobenzene	5	2	mg/kg	< 0.00016	< 0.00018	< 0.00016	< 0.00018	< 0.00017	< 0.00018	< 0.00014	< 0.00014	
2-Butanone (MEK)	3100	0.9	mg/kg	< 0.0018	< 0.0021	< 0.0018	< 0.0021	< 0.0019	< 0.0020	< 0.0016	< 0.0016	
2-Hexanone	NS	NS	mg/kg	< 0.0015	< 0.0018	< 0.0016	< 0.0017	< 0.0017	< 0.0017	< 0.0014	< 0.0014	
4-methyl-2-pentanone (MIBK)	NS	NS	mg/kg	< 0.00052	< 0.00060	< 0.00052	< 0.00059	< 0.00056	< 0.00057	< 0.00046	< 0.00046	
Acetone	70000	19	mg/kg	< 0.0024	< 0.0028	< 0.0024	< 0.0028	< 0.0026	< 0.0027	< 0.0022	< 0.0021	
Benzene	2	0.005	mg/kg	< 0.00017	< 0.00020	< 0.00017	< 0.00019	< 0.00018	< 0.00019	< 0.00015	< 0.00015	
Bromodichloromethane	1	0.005	mg/kg	< 0.00020	< 0.00023	< 0.00020	< 0.00022	< 0.00021	< 0.00022	< 0.00018	< 0.00017	
Bromoform	81	0.03	mg/kg	< 0.00017	< 0.00020	< 0.00017	< 0.00020	< 0.00019	< 0.00019	< 0.00015	< 0.00015	
Bromomethane	25	0.04	mg/kg	< 0.00028	< 0.00032	< 0.00028	< 0.00032	< 0.00030	< 0.00031	< 0.00025	< 0.00025	
Carbon disulfide	7800	6	mg/kg	< 0.00028	< 0.00033	< 0.00029	< 0.00032	< 0.00030	< 0.00031	< 0.00025	< 0.00025	
Carbon tetrachloride	0.6	0.005	mg/kg	< 0.00014	< 0.00016	< 0.00014	< 0.00016	< 0.00015	< 0.00015	< 0.00012	< 0.00012	
Chlorobenzene	510	0.6	mg/kg	< 0.00013	< 0.00015	< 0.00014	< 0.00015	< 0.00014	< 0.00015	< 0.00012	< 0.00012	
Chloroethane	220	NA	mg/kg	< 0.00028	< 0.00032	< 0.00028	< 0.00031	< 0.00030	< 0.00030	< 0.00025	< 0.00024	
Chloroform	0.6	0.4	mg/kg	< 0.00013	< 0.00015	< 0.00013	< 0.00015	< 0.00014	< 0.00014	< 0.00012	< 0.00011	
Chloromethane	4	NA	mg/kg	< 0.00029	< 0.00034	< 0.00030	< 0.00033	< 0.00032	< 0.00032	< 0.00026	< 0.00026	
cis-1,2-Dichloroethene	230	0.3	mg/kg	< 0.00025	< 0.00029	< 0.00025	< 0.00029	< 0.00027	< 0.00028	< 0.00022	< 0.00022	
cis-1,3-Dichloropropene	2	0.005	mg/kg	< 0.00012	< 0.00014	< 0.00012	< 0.00014	< 0.00013	< 0.00014	< 0.00011	< 0.00011	
Cyclohexane	NS	NS	mg/kg	< 0.00034	< 0.00039	< 0.00035	< 0.00039	< 0.00037	< 0.00038	< 0.00030	< 0.00030	
Dibromochloromethane	3	0.005	mg/kg	< 0.00017	< 0.00020	< 0.00017	< 0.00019	< 0.00018	< 0.00019	< 0.00015	< 0.00015	
Dichlorodifluoromethane	490	39	mg/kg	< 0.00051	< 0.00058	< 0.00051	< 0.00057	< 0.00054	< 0.00056	< 0.00045	< 0.00044	
Ethylbenzene	7800	13	mg/kg	< 0.00019	< 0.00022	< 0.00019	< 0.00021	< 0.00020	< 0.00021	< 0.00017	< 0.00016	
Freon 113	NS	NS	mg/kg	< 0.00053	< 0.00060	< 0.00053	< 0.00060	< 0.00056	< 0.00058	< 0.00047	< 0.00046	
Isopropylbenzene	NS	NS	mg/kg	< 0.00018	< 0.00020	< 0.00018	< 0.00020	< 0.00019	< 0.00019	< 0.00016	< 0.00015	
Methyl acetate	78000	22	mg/kg	< 0.0011	< 0.0012	< 0.0011	< 0.0012	< 0.0011	< 0.0012	< 0.00095	< 0.00094	
Methyl tert butyl ether	110	0.2	mg/kg	< 0.00016	< 0.00019	< 0.00016	< 0.00018	< 0.00017	< 0.00018	< 0.00014	< 0.00014	
Methylcyclohexane	NS	NS	mg/kg	< 0.00021	< 0.00024	< 0.00021	< 0.00024	< 0.00023	< 0.00023	< 0.00019	< 0.00018	
Methylene chloride	34	0.01	mg/kg	< 0.0014	< 0.0017	< 0.0015	< 0.0016	< 0.0016	< 0.0016	< 0.0013	< 0.0013	
Styrene	90	3	mg/kg	< 0.00017	< 0.00020	< 0.00018	< 0.00020	< 0.00019	< 0.00019	< 0.00016	< 0.00015	
Tetrachloroethene	2	0.005	mg/kg	< 0.00017	< 0.00020	< 0.00017	< 0.00019	< 0.00018	< 0.00019	< 0.00015	< 0.00015	
Toluene	6300	7	mg/kg	< 0.00023	< 0.00026	< 0.00023	< 0.00026	< 0.00024	< 0.00024	< 0.00020	< 0.00020	
Trans-1,2-dichloroethene	300	0.6	mg/kg	< 0.00018	< 0.00021	< 0.00018	< 0.00021	< 0.00020	< 0.00020	< 0.00016	< 0.00016	
trans-1,3-Dichloropropene	2	0.005	mg/kg	< 0.00016	< 0.00019	< 0.00017	< 0.00019	< 0.00018	< 0.00018	< 0.00015	< 0.00014	
Trichloroethene	7	0.01	mg/kg	< 0.00019	< 0.00022	< 0.00020	< 0.00022	< 0.00021	< 0.00021	< 0.00017	< 0.00017	
Trichlorofluoromethane	23000	34	mg/kg	< 0.00017	< 0.00019	< 0.00017	< 0.00019	< 0.00018	< 0.00018	< 0.00015	< 0.00015	
Vinyl Chloride	0.7	0.005	mg/kg	< 0.00036	< 0.00042	< 0.00037	< 0.00041	< 0.00039	< 0.00040	< 0.00032	< 0.00032	
Xylenes	12000	19	mg/kg	< 0.00021	< 0.00024	< 0.00021	< 0.00024	< 0.00022	< 0.00023	< 0.00019	< 0.00018	
Total Alkanes	NS	NS	mg/kg	0	0	0	0	0	0	0	0	
Total TIC, Volatile	NS	NS	mg/kg	0.0369 JN	0.0169 JN	0	0.0085 JN	0.0069 JN	0.0188 JN	0.0252 JN	0.0214 JN	

Table 1
Post-Excavation Results for SR-16 Removal Action

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Location ID	New Jersey Residential Direct Contact	New Jersey Default Impact to Groundwater Soil Screening Levels	Units	SR16-SS-B1 SR16-SS-B1-0.5-1.0 6/20/2014 Final	SR16-SS-B2 SR16-SS-B2-0.5-1.0 6/20/2014 Final	SR16-SS-B3 SR16-SS-B3-0.5-1.0 6/20/2014 Final	SR16-SS-B4 SR16-SS-B4-0.5-1.0 6/20/2014 Final	SR16-SS-B5 SR16-SS-B5-0.5-1.0 6/20/2014 Final	SR16-SS-B6 SR16-SS-B6-0.5-1.0 6/20/2014 Final	SR16-SS-B7 SR16-SS-B7-0.5-1.0 6/20/2014 Final	SR16-SS-B7 DUP-062014 6/20/2014 Final	
SVOCs												
1,1'-Biphenyl	3100	140	mg/kg	< 0.0040	< 0.0048	< 0.0039	< 0.0041	< 0.0044	< 0.0041	< 0.0043	< 0.0041	
2,4,5-Trichlorophenol	6100	68	mg/kg	< 0.040	< 0.048	< 0.039	< 0.041	< 0.044	< 0.041	< 0.043	< 0.041	
2,4,6-Trichlorophenol	19	0.2	mg/kg	< 0.033	< 0.039	< 0.031	< 0.034	< 0.036	< 0.033	< 0.035	< 0.033	
2,4-Dichlorophenol	180	0.2	mg/kg	< 0.056	< 0.067	< 0.054	< 0.058	< 0.061	< 0.057	< 0.059	< 0.057	
2,4-Dimethylphenol	1200	1	mg/kg	< 0.059	< 0.069	< 0.056	< 0.060	< 0.064	< 0.059	< 0.062	< 0.060	
2,4-Dinitrophenol	120	0.3	mg/kg	< 0.043	< 0.050	< 0.041	< 0.044	< 0.046	< 0.043	< 0.045	< 0.043	
2,4-Dinitrotoluene	0.7	NS	mg/kg	< 0.015	< 0.018	< 0.015	< 0.016	< 0.017	< 0.015	< 0.016	< 0.016	
2,6-Dinitrotoluene	0.7	NS	mg/kg	< 0.013	< 0.016	< 0.013	< 0.014	< 0.014	< 0.013	< 0.014	< 0.014	
2-Chloronaphthalene	NS	NS	mg/kg	< 0.011	< 0.013	< 0.010	< 0.011	< 0.012	< 0.011	< 0.011	< 0.011	
2-Chlorophenol	310	0.8	mg/kg	< 0.035	< 0.041	< 0.033	< 0.036	< 0.038	< 0.035	< 0.037	< 0.036	
2-Methylnaphthalene	230	8	mg/kg	< 0.019	< 0.023	< 0.019	< 0.020	< 0.021	< 0.020	< 0.021	< 0.020	
2-Methylphenol	310	NS	mg/kg	< 0.040	< 0.047	< 0.038	< 0.041	< 0.043	< 0.040	< 0.042	< 0.041	
2-Nitroaniline	39	NS	mg/kg	< 0.015	< 0.018	< 0.015	< 0.016	< 0.017	< 0.016	< 0.016	< 0.016	
2-Nitrophenol	NS	NS	mg/kg	< 0.037	< 0.044	< 0.035	< 0.038	< 0.040	< 0.037	< 0.039	< 0.038	
3&4-Methylphenol	NS	NS	mg/kg	< 0.044	< 0.053	< 0.042	< 0.045	< 0.048	< 0.045	< 0.047	< 0.045	
3,3'-Dichlorobenzidine	1	0.2	mg/kg	< 0.0088	< 0.011	< 0.0084	< 0.0091	< 0.0096	< 0.0090	< 0.0093	< 0.0091	
3-Nitroaniline	NS	NS	mg/kg	< 0.014	< 0.017	< 0.013	< 0.014	< 0.015	< 0.014	< 0.015	< 0.014	
4,6-Dinitro-2-methylphenol	6	0.3	mg/kg	< 0.043	< 0.050	< 0.041	< 0.044	< 0.046	< 0.043	< 0.045	< 0.043	
4-Bromophenyl phenyl ether	NS	NS	mg/kg	< 0.013	< 0.015	< 0.012	< 0.013	< 0.014	< 0.013	< 0.013	< 0.013	
4-Chloro-3-Methylphenol	NS	NS	mg/kg	< 0.035	< 0.041	< 0.033	< 0.036	< 0.038	< 0.035	< 0.037	< 0.036	
4-Chloroaniline	NS	NS	mg/kg	< 0.011	< 0.013	< 0.011	< 0.011	< 0.012	< 0.011	< 0.012	< 0.011	
4-Chlorophenyl phenyl ether	NS	NS	mg/kg	< 0.010	< 0.012	< 0.010	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	
4-Nitroaniline	NS	NS	mg/kg	< 0.014	< 0.016	< 0.013	< 0.014	< 0.015	< 0.014	< 0.014	< 0.014	
4-Nitrophenol	NS	NS	mg/kg	< 0.059	< 0.070	< 0.056	< 0.060	< 0.064	< 0.060	< 0.062	< 0.060	
Acenaphthene	3400	110	mg/kg	< 0.010	< 0.012	< 0.0096	< 0.010	< 0.011	< 0.010	< 0.011	< 0.010	
Acenaphthylene	NS	NS	mg/kg	0.0221 J	0.0839	0.128	0.112	0.0180 J	0.0212 J	0.0501	0.0235 J	
Acetophenone	2	3	mg/kg	< 0.0061	< 0.0073	< 0.0059	< 0.0063	< 0.0067	< 0.0062	< 0.0065	< 0.0063	
Anthracene	17000	2400	mg/kg	< 0.012	0.0400 J	0.0596	0.0558	< 0.013	< 0.012	0.0283 J	< 0.012	
Atrazine	210	0.2	mg/kg	< 0.0069	< 0.0081	< 0.0065	< 0.0070	< 0.0075	< 0.0070	< 0.0072	< 0.0070	
Benzaldehyde	6100	NS	mg/kg	< 0.0080	< 0.0095	< 0.0076	< 0.0082	< 0.0087	< 0.0081	< 0.0085	< 0.0082	
Benz(a)anthracene	0.6	0.8	mg/kg	0.0200 J	0.0828	0.0980	0.113	0.0166 J	0.0238 J	0.0584	0.0274 J	
Benz(a)pyrene	0.2	0.2	mg/kg	0.0213 J	0.0905	0.116	0.112	0.0183 J	0.0214 J	0.0609	0.0222 J	
Benz(b)fluoranthene	0.6	2	mg/kg	0.0230 J	0.0948	0.118	0.119	0.0263 J	0.0259 J	0.0714	0.0282 J	
Benz(g,h,i)perylene	380000	NS	mg/kg	0.0196 J	0.0688	0.0937	0.0830	0.0171 J	0.0187 J	0.0445	0.0206 J	
Benz(o)fluoranthene	6	25	mg/kg	< 0.013	0.0219 J	0.0371	0.0384	< 0.014	< 0.013	0.0203 J	< 0.013	
Benzyl butyl phthalate	1200	NS	mg/kg	< 0.020	< 0.024	< 0.019	< 0.021	< 0.022	< 0.020	< 0.021	< 0.021	
bis(2-Chloroethoxy)methane	NS	0.2	mg/kg	< 0.014	< 0.017	< 0.013	< 0.014	< 0.015	< 0.014	< 0.015	< 0.014	
bis(2-Chloroethyl)ether	0.4	5	mg/kg	< 0.010	< 0.012	< 0.010	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	
bis(2-Chloroisopropyl)ether	23	1200	mg/kg	< 0.010	< 0.012	< 0.0099	< 0.011	< 0.011	< 0.010	< 0.011	< 0.011	
bis(2-Ethylhexyl)phthalate	35	230	mg/kg	< 0.031	< 0.037	< 0.029	< 0.017 UB	< 0.034	< 0.031	< 0.032	< 0.031	
Caprolactam	31000	12	mg/kg	< 0.011	< 0.013	< 0.010	< 0.011	< 0.012	< 0.011	< 0.012	< 0.011	
Carbazole	24	NS	mg/kg	< 0.016	< 0.019	< 0.015	< 0.017	< 0.018	< 0.016	< 0.017	< 0.016	
Chrysene	62	80	mg/kg	0.0317 J	0.141	0.175	0.191	0.0307 J	0.0348 J	0.0980	0.0398	
Dibenzo(a,h)anthracene	0.2	0.8	mg/kg	< 0.012	< 0.014	0.0213 J	0.0192 J	< 0.013	< 0.012	< 0.013	< 0.012	
Dibenzofuran	NS	NS	mg/kg	< 0.010	< 0.012	< 0.0099	< 0.011	< 0.011	< 0.010	< 0.011	< 0.011	
Diethyl phthalate	49000	88	mg/kg	< 0.012	< 0.014	< 0.011	< 0.012	< 0.013	< 0.012	< 0.013	< 0.012	
Dimethyl phthalate	NS	NS	mg/kg	< 0.012	< 0.015	< 0.012	< 0.013	< 0.013	< 0.012	< 0.013	< 0.013	
di-n-butyl phthalate	6100	760	mg/kg	< 0.0077	< 0.0092	< 0.0074	< 0.0079	< 0.0084	< 0.0078	< 0.0082	< 0.0079	
di-n-octylphthalate	2400	3300	mg/kg	< 0.017	< 0.020	< 0.016	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017	
Fluoranthene	2300	1300	mg/kg	0.0263 J	0.146	0.165	0.205	0.0322 J	0.0368	0.108	0.0440	
Fluorene	2300	170	mg/kg	< 0.011	< 0.014	0.0138 J	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	

Table 1
Post-Excavation Results for SR-16 Removal Action

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Location ID	New Jersey Residential Direct Contact	New Jersey Default Impact to Groundwater Soil Screening Levels	Units	SR16-SS-B1 SR16-SS-B1-0.5-1.0 6/20/2014 Final	SR16-SS-B2 SR16-SS-B2-0.5-1.0 6/20/2014 Final	SR16-SS-B3 SR16-SS-B3-0.5-1.0 6/20/2014 Final	SR16-SS-B4 SR16-SS-B4-0.5-1.0 6/20/2014 Final	SR16-SS-B5 SR16-SS-B5-0.5-1.0 6/20/2014 Final	SR16-SS-B6 SR16-SS-B6-0.5-1.0 6/20/2014 Final	SR16-SS-B7 SR16-SS-B7-0.5-1.0 6/20/2014 Final	SR16-SS-B7 DUP-062014 6/20/2014 Final	
Validation Status												
Hexachlorobenzene	0.3	0.2	mg/kg	< 0.011	< 0.013	< 0.011	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	
Hexachlorobutadiene	6	0.9	mg/kg	< 0.0097	< 0.011	< 0.0092	< 0.009	< 0.011	< 0.0098	< 0.010	< 0.0099	
Hexachlorocyclopentadiene	45	320	mg/kg	< 0.036	< 0.042	< 0.034	< 0.036	< 0.039	< 0.036	< 0.037	< 0.036	
Hexachloroethane	35	0.2	mg/kg	< 0.0097	< 0.011	< 0.0092	< 0.0099	< 0.011	< 0.0098	< 0.010	< 0.0099	
Indeno(1,2,3-cd)pyrene	0.6	7	mg/kg	0.0168 J	0.0562	0.0777	0.0663	0.0153 J	0.0155 J	0.0388	0.0153 J	
Isothiophene	510	0.2	mg/kg	< 0.0094	< 0.011	< 0.0089	< 0.0096	< 0.010	< 0.0095	< 0.0099	< 0.0096	
Naphthalene	6	25	mg/kg	< 0.0095	< 0.011	< 0.0091	< 0.0098	< 0.010	< 0.0096	< 0.010	< 0.0097	
Nitrobenzene	31	0.2	mg/kg	< 0.010	< 0.012	< 0.0096	< 0.010	< 0.011	< 0.010	< 0.011	< 0.010	
N-Nitroso-di-n-Propylamine	0.2	0.2	mg/kg	< 0.0085	< 0.010	< 0.0081	< 0.0087	< 0.0093	< 0.0086	< 0.0090	< 0.0087	
N-Nitrosodiphenylamine	99	0.4	mg/kg	< 0.021	< 0.025	< 0.020	< 0.021	< 0.023	< 0.021	< 0.022	< 0.021	
Pentachlorophenol	3	0.3	mg/kg	< 0.060	< 0.071	< 0.057	< 0.061	< 0.065	< 0.060	< 0.063	< 0.061	
Phenanthrene	NS	NS	mg/kg	0.0225 J	0.174	0.145	0.230	0.0341 J	0.0417	0.132	0.0627	
Phenol	18000	8	mg/kg	< 0.037	< 0.043	< 0.035	< 0.038	< 0.040	< 0.037	< 0.039	< 0.037	
Pyrene	1700	840	mg/kg	0.0543	0.297	0.334	0.383	0.0548	0.0658	0.191	0.0842	
Total Alkanes	NS	NS	mg/kg	0	0	0	0.66 JN	0.34 JN	0.31 JN	0	0	
Total TIC, Semi-Volatile	NS	NS	mg/kg	0.22 JN	2.21 JN	0.5 JN	2.75 JN	5.9 JN	1.32 JN	2.49 JN	1.28 JN	
PCBs												
PCB 1016	0.2	0.2	mg/kg	< 0.0087	< 0.010	< 0.0083	< 0.0096	< 0.0091	< 0.0087	< 0.0096	< 0.0098	
PCB 1221	0.2	0.2	mg/kg	< 0.020	< 0.024	< 0.019	< 0.022	< 0.021	< 0.020	< 0.022	< 0.023	
PCB 1232	0.2	0.2	mg/kg	< 0.017	< 0.020	< 0.016	< 0.019	< 0.018	< 0.017	< 0.019	< 0.019	
PCB 1242	0.2	0.2	mg/kg	< 0.011	< 0.013	< 0.010	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012	
PCB 1248	0.2	0.2	mg/kg	< 0.010	< 0.012	< 0.0097	< 0.011	< 0.010	< 0.010	< 0.011	< 0.011	
PCB 1254	0.2	0.2	mg/kg	< 0.016	< 0.019	< 0.015	< 0.017	< 0.016	< 0.016	< 0.017	< 0.018	
PCB 1260	0.2	0.2	mg/kg	< 0.011	< 0.013	< 0.011	< 0.012	< 0.012	< 0.011	< 0.012	< 0.012	
PCB 1262	0.2	0.2	mg/kg	< 0.011	< 0.013	< 0.010	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012	
PCB 1268	0.2	0.2	mg/kg	< 0.0098	< 0.012	< 0.0094	< 0.011	< 0.010	< 0.0099	< 0.011	< 0.011	
Metals												
Aluminum	78000	6000	mg/kg	10800 J	11300 J	8800 J	11300 J	17900 J	11100 J	15200 J	16700 J	
Antimony	31	6	mg/kg	0.31 J	< 0.31 J	< 0.24 J	0.56 J	0.38 J	< 0.27 J	< 0.29 J	< 0.29 J	
Arsenic	19	19	mg/kg	3.1	3.9	2.7	6.0	4.6	4.2	5.9	10.8	
Barium	16000	2100	mg/kg	32.5	50.0	22.7	40.0	44.9	36.6	52.6	51.2	
Beryllium	16	0.7	mg/kg	0.54	0.50	0.43	0.46	0.67	0.50	0.56	0.57	
Cadmium	78	2	mg/kg	0.20 B	0.16 B	0.18 B	0.24 B	0.25 B	0.18 B	0.18 B	0.16 B	
Calcium	NS	NS	mg/kg	1150 J	963 J	1360 J	3040 J	1330 J	1590 J	1500 J	2920 J	
Chromium	NS	NS	mg/kg	15.3	14.1	24.6	15.4	16.9	15.0	17.8	18.0	
Cobalt	1600	90	mg/kg	8.1	7.1	7.1	9.0	9.4	7.2	7.9	8.6	
Copper	3100	11000	mg/kg	23.9	18.0	26.8	21.2	14.1	22.8	21.5	22.9	
Iron	NS	NS	mg/kg	19300 J	17000 J	17000 J	19300 J	24500 J	17700 J	20600 J	21800 J	
Lead	400	90	mg/kg	8.8	15.4	9.7	30.9	21.8	8.9	20.2	19.8	
Magnesium	NS	NS	mg/kg	4280 J	2400 J	4580 J	3560 J	4390 J	3430 J	3520 J	3810 J	
Manganese	11000	65	mg/kg	351 J	492 J	252 J	303 J	471 J	305 J	329 J	384 J	
Mercury	23	0.1	mg/kg	< 0.036 UB	0.033 J	< 0.032 UB	< 0.035 UB	0.065 J	< 0.033 UB	0.068 J	0.068 J	
Nickel	1600	48	mg/kg	18.8	11.4	15.1	17.8	17.0	16.5	17.2	19.3	
Potassium	NS	NS	mg/kg	780 B	565 B	754 B	794 B	512 B	746 B	767 B	697 B	
Selenium	390	11	mg/kg	0.64 B	1.2 B	0.29 B	1.2 B	1.3 B	0.68 B	1.3 B	1.1 B	
Silver	390	1	mg/kg	0.37 B	0.5 B	0.25 B	0.3 B	0.6	0.38 B	0.16 B	0.2 B	
Sodium	NS	NS	mg/kg	77.6 J	420 B	95.3 B	112 J	64.5 J	107 B	80.5 J	87.4 J	
Thallium	5	3	mg/kg	< 0.39	< 0.47	< 0.36	< 0.43	< 0.43	< 0.41	< 0.44	< 0.43	
Vanadium	78	NS	mg/kg	24.4	26.6	31.4	32.9	46.0	24.1	32.7	33.8	
Zinc	23000	930	mg/kg	62.3 J	43.0 J	52.2 J	51.7 J	56.2 J	48.8 J	53.0 J	51.9 J	

Table 1
Post-Excavation Results for SR-16 Removal Action

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Location ID	New Jersey Residential Direct Contact	New Jersey Default Impact to Groundwater Soil Screening Levels	Units	SR16-SS-B1 SR16-SS-B1-0.5-1.0 6/20/2014 Final	SR16-SS-B2 SR16-SS-B2-0.5-1.0 6/20/2014 Final	SR16-SS-B3 SR16-SS-B3-0.5-1.0 6/20/2014 Final	SR16-SS-B4 SR16-SS-B4-0.5-1.0 6/20/2014 Final	SR16-SS-B5 SR16-SS-B5-0.5-1.0 6/20/2014 Final	SR16-SS-B6 SR16-SS-B6-0.5-1.0 6/20/2014 Final	SR16-SS-B7 SR16-SS-B7-0.5-1.0 6/20/2014 Final	SR16-SS-B7 DUP-062014 6/20/2014 Final	
Percent Solids												
Solids, Percent	NS	NS	%	92.0	80.1	94.6	89.1	84.2	90.1	88.9	87.7	

Notes:

No exceedances of New Jersey Residential Direct Contact Soil Remediation Standards
Shade Result exceeds New Jersey Default Impact to Groundwater Soil Screening Levels

B (inorganic) = estimated result is between the detection limit and quantification limit

B (organic) = analyte found in associated method blank

J = estimated result

mg/kg = milligrams per kilogram

N = The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

NS = no standard

PCBs = polychlorinated biphenyls

UB = Compound considered non-detect at the listed value due to associated blank contamination

% = percent

Table 1
Post-Excavation Results for SR-16 Removal Action

Privileged and Confidential
Prepared at Request of Counsel

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Location ID Sample ID Sample Date Validation Status	Units	QAQC FB-062014 6/20/2014	QAQC TB-062014 6/20/2014
Volatile Organic Compounds			
1,1,1-Trichloroethane	µg/L	< 0.32	< 0.32
1,1,2,2-Tetrachloroethane	µg/L	< 0.39	< 0.39
1,1,2-Trichloroethane	µg/L	< 0.28	< 0.28
1,1-Dichloroethane	µg/L	< 0.35	< 0.35
1,1-Dichloroethene	µg/L	< 0.50	< 0.50
1,2,4-Trichlorobenzene	µg/L	< 0.22	< 0.22
1,2-Dibromo-3-Chloropropane (DBCP)	µg/L	< 1.2	< 1.2
1,2-Dibromoethane	µg/L	< 0.23	< 0.23
1,2-Dichlorobenzene	µg/L	< 0.16	< 0.16
1,2-Dichloroethane	µg/L	< 0.30	< 0.30
1,2-Dichloropropane	µg/L	< 0.43	< 0.43
1,3-Dichlorobenzene	µg/L	< 0.26	< 0.26
1,4-Dichlorobenzene	µg/L	< 0.24	< 0.24
2-Butanone (MEK)	µg/L	< 2.5	< 2.5
2-Hexanone	µg/L	< 1.7	< 1.7
4-methyl-2-pentanone (MIBK)	µg/L	< 1.1	< 1.1
Acetone	µg/L	< 2.6	< 2.6
Benzene	µg/L	< 0.21	< 0.21
Bromodichloromethane	µg/L	< 0.28	< 0.28
Bromoform	µg/L	< 0.31	< 0.31
Bromomethane	µg/L	< 0.39	< 0.39
Carbon disulfide	µg/L	< 0.50	< 0.50
Carbon tetrachloride	µg/L	< 0.24	< 0.24
Chlorobenzene	µg/L	< 0.27	< 0.27
Chloroethane	µg/L	< 0.56	< 0.56
Chloroform	µg/L	< 0.20	< 0.20
Chloromethane	µg/L	< 0.33	< 0.33
cis-1,2-Dichloroethene	µg/L	< 0.33	< 0.33
cis-1,3-Dichloropropene	µg/L	< 0.28	< 0.28
Cyclohexane	µg/L	< 0.37	< 0.37
Dibromochloromethane	µg/L	< 0.25	< 0.25
Dichlorodifluoromethane	µg/L	< 0.73	< 0.73
Ethylbenzene	µg/L	< 0.40	< 0.40
Freon 113	µg/L	< 0.45	< 0.45
Isopropylbenzene	µg/L	< 0.26	< 0.26
Methyl acetate	µg/L	< 3.1	< 3.1
Methyl tert butyl ether	µg/L	< 0.26	< 0.26
Methylcyclohexane	µg/L	< 0.22	< 0.22
Methylene chloride	µg/L	< 0.81	< 0.81
Styrene	µg/L	< 0.26	< 0.26
Tetrachloroethene	µg/L	< 0.35	< 0.35
Toluene	µg/L	< 0.22	< 0.22
Trans-1,2-dichloroethene	µg/L	< 0.51	< 0.51
trans-1,3-Dichloropropene	µg/L	< 0.32	< 0.32
Trichloroethene	µg/L	< 0.25	< 0.25
Trichlorofluoromethane	µg/L	< 0.28	< 0.28
Vinyl Chloride	µg/L	< 0.17	< 0.17
Xylenes	µg/L	< 0.20	< 0.20
Total Alkanes	µg/L	0	0
Total TIC, Volatile	µg/L	0	0
SVOCs			
1,1'-Biphenyl	µg/L	< 0.30 J	NA
2,4,5-Trichlorophenol	µg/L	< 1.9 J	NA
2,4,6-Trichlorophenol	µg/L	< 1.7 J	NA
2,4-Dichlorophenol	µg/L	< 1.8 J	NA
2,4-Dimethylphenol	µg/L	< 2.0 J	NA
2,4-Dinitrophenol	µg/L	< 7.1 J	NA
2,4-Dinitrotoluene	µg/L	< 0.35 J	NA
2,6-Dinitrotoluene	µg/L	< 0.28 J	NA
2-Chloronaphthalene	µg/L	< 0.37 J	NA
2-Chlorophenol	µg/L	< 1.4 J	NA
2-Methylnaphthalene	µg/L	< 0.32 J	NA
2-Methylphenol	µg/L	< 1.4 J	NA
2-Nitroaniline	µg/L	< 0.34 J	NA
2-Nitrophenol	µg/L	< 2.0 J	NA
3&4-Methylphenol	µg/L	< 1.2 J	NA
3,3'-Dichlorobenzidine	µg/L	< 0.61 J	NA
3-Nitroaniline	µg/L	< 0.28 J	NA
4,6-Dinitro-2-methylphenol	µg/L	< 1.4 J	NA
4-Bromophenyl phenyl ether	µg/L	< 0.27 J	NA
4-Chloro-3-Methylphenol	µg/L	< 1.4 J	NA
4-Chloroaniline	µg/L	< 0.33 J	NA
4-Chlorophenyl phenyl ether	µg/L	< 0.41 J	NA
4-Nitroaniline	µg/L	< 0.33 J	NA

Table 1
Post-Excavation Results for SR-16 Removal Action

Privileged and Confidential
Prepared at Request of Counsel

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Location ID Sample ID Sample Date Validation Status	Units	QAQC FB-062014 6/20/2014 Final	QAQC TB-062014 6/20/2014 Final
4-Nitrophenol	µg/L	< 0.99 J	NA
Acenaphthene	µg/L	< 0.32 J	NA
Acenaphthylene	µg/L	< 0.22 J	NA
Acetophenone	µg/L	< 0.40 J	NA
Anthracene	µg/L	< 0.21 J	NA
Atrazine	µg/L	< 0.46 J	NA
Benzaldehyde	µg/L	< 0.73 J	NA
Benzo(a)anthracene	µg/L	< 0.23 J	NA
Benzo(a)pyrene	µg/L	< 0.26 J	NA
Benzo(b)fluoranthene	µg/L	< 0.24 J	NA
Benzo(g,h,i)perylene	µg/L	< 0.34 J	NA
Benzo(k)fluoranthene	µg/L	< 0.24 J	NA
Benzyl butyl phthalate	µg/L	< 0.24 J	NA
bis(2-Chloroethoxy)methane	µg/L	< 0.46 J	NA
bis(2-Chloroethyl)ether	µg/L	< 0.47 J	NA
bis(2-Chloroisopropyl)ether	µg/L	< 0.44 J	NA
bis(2-Ethylhexyl)phthalate	µg/L	1.4 J	NA
Caprolactam	µg/L	< 0.44 J	NA
Carbazole	µg/L	< 0.18 J	NA
Chrysene	µg/L	< 0.18 J	NA
Dibenzo(a,h)anthracene	µg/L	< 0.30 J	NA
Dibenzofuran	µg/L	< 0.25 J	NA
Diethyl phthalate	µg/L	< 0.25 J	NA
Dimethyl phthalate	µg/L	< 0.28 J	NA
di-n-butyl phthalate	µg/L	< 0.63 J	NA
di-n-octylphthalate	µg/L	< 0.27 J	NA
Fluoranthene	µg/L	< 0.18 J	NA
Fluorene	µg/L	< 0.30 J	NA
Hexachlorobenzene	µg/L	< 0.50 J	NA
Hexachlorobutadiene	µg/L	< 0.42 J	NA
Hexachlorocyclopentadiene	µg/L	< 0.52 J	NA
Hexachloroethane	µg/L	< 0.31 J	NA
Indeno(1,2,3-cd)pyrene	µg/L	< 0.44 J	NA
Isophrone	µg/L	< 0.37 J	NA
Naphthalene	µg/L	< 0.29 J	NA
Nitrobenzene	µg/L	< 0.56 J	NA
N-Nitroso-di-n-Propylamine	µg/L	< 0.41 J	NA
N-Nitrosodiphenylamine	µg/L	< 0.22 J	NA
Pentachlorophenol	µg/L	< 1.5 J	NA
Phenanthrene	µg/L	< 0.20 J	NA
Phenol	µg/L	< 0.59 J	NA
Pyrene	µg/L	< 0.21 J	NA
Total Alkanes	µg/L	0	NA
Total TIC, Semi-Volatile	µg/L	0	NA
PCBS			
PCB 1016	µg/L	< 0.085	NA
PCB 1221	µg/L	< 0.18	NA
PCB 1232	µg/L	< 0.26	NA
PCB 1242	µg/L	< 0.057	NA
PCB 1248	µg/L	< 0.097	NA
PCB 1254	µg/L	< 0.094	NA
PCB 1260	µg/L	< 0.14	NA
PCB 1262	µg/L	< 0.040	NA
PCB 1268	µg/L	< 0.087	NA
Metals			
Aluminum	µg/L	< 11	NA
Antimony	µg/L	< 2.6	NA
Arsenic	µg/L	< 2.6	NA
Barium	µg/L	< 1.0	NA
Beryllium	µg/L	< 0.40	NA
Cadmium	µg/L	< 0.70	NA
Calcium	µg/L	< 19	NA
Chromium	µg/L	< 0.89	NA
Cobalt	µg/L	< 0.83	NA
Copper	µg/L	< 1.2	NA
Iron	µg/L	< 12	NA
Lead	µg/L	< 1.3	NA
Magnesium	µg/L	< 41	NA
Manganese	µg/L	< 0.48	NA
Mercury	µg/L	0.096 B	NA
Nickel	µg/L	< 0.75	NA
Potassium	µg/L	< 50	NA
Selenium	µg/L	< 3.6	NA
Silver	µg/L	< 1.2	NA
Sodium	µg/L	20.4 B	NA

Table 1
Post-Excavation Results for SR-16 Removal Action

*Privileged and Confidential
Prepared at Request of Counsel*

**Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey**

Location ID		QAQC	QAQC
Sample ID		FB-062014	TB-062014
Sample Date		6/20/2014	6/20/2014
Validation Status	Units	Final	Final
Thallium	µg/L	< 1.8	NA
Vanadium	µg/L	< 0.87	NA
Zinc	µg/L	< 7.6	NA

Notes:

B (inorganic) = estimated result is between the detection limit and quantification limit
J = estimated result
NA = not analyzed
QAQC = quality assurance quality control
µg/L = micrograms per liter

Table 2 - Site-Specific Background Soil Sampling Data

Privileged and Confidential
Prepared at Request of Counsel

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Chemical Name		Aluminum	Arsenic	Barium	Calcium	Iron	Lead	Magnesium	Manganese	Potassium	Strontrium	Vanadium	Zinc
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Sample Date												
Mine Tailings													
MTI-PM-MT-26	6/7/2007	17000	20	170	36000	370000	8.6	10000	810	5600	70	910	45
MTI-PM-MT-27	6/7/2007	12000	25	130	35000	470000	8.5	6200	540	4700	46	1000	27
MTI-PM-MT-28	6/7/2007	9400	24	83	22000	360000	2.4	5400	500	2500	39	1100	28
MTI-PM-MT-29	6/7/2007	12000	22	120	28000	450000	3.7	7400	600	4600	48	1100	160
MTI-PM-MT-30	6/7/2007	9800	22	83	40000	530000	1.6	6400	520	2800	44	1100	25
MTI-PM-MT-31	6/7/2007	15000	17	190	32000	560000	2.4	7200	580	5000	49	1100	30
MTI-PM-MT-32	6/7/2007	28000	37	210	63000	360000	11	19000	930	7000	95	760	52
MTI-PM-MT-33	6/7/2007	32000	17	320	66000	290000	7.7	18000	920	11000	110	630	39
MTI-PM-MT-34	6/7/2007	29000	25	310	54000	260000	16	15000	940	9500	110	610	54
MTI-PM-MT-35	6/7/2007	3000	3	11	4900	630000	0.7	2000	570	540	8.3	1100	22
MTI-PM-MT-36	6/7/2007	21000	21	240	46000	400000	8.1	13000	800	6900	76	920	68
MTI-PM-MT-37	6/12/2007	47000	25	410	67000	140000	11	23000	760	13000	130	330	43
MTI-OC-MT-01	6/5/2007	40000	63	390	110000	130000	7.9	26000	1100	12000	150	330	42
MTI-OC-MT-02	6/5/2007	46000	40	380	81000	170000	17	26000	1000	11000	130	400	67
MTI-OC-MT-03	6/5/2007	55000	14	370	63000	97000	4.8	41000	1400	15000	110	280	97
MTI-OC-MT-04	6/5/2007	67000	16	380	77000	130000	6	50000	1400	16000	110	300	100
MTI-OC-MT-05	6/5/2007	33000	24	330	63000	240000	9.8	16000	960	11000	110	540	54
MTI-OC-MT-06	6/5/2007	37000	33	360	64000	270000	10	17000	970	11000	110	560	56
MTI-OC-MT-07	6/5/2007	38000	50	360	85000	150000	110	21000	940	11000	150	420	43
MTI-OC-MT-08	6/5/2007	37000	36	390	92000	200000	10	20000	900	12000	140	490	37
MTI-OC-MT-09	6/5/2007	36000	24	390	57000	300000	5.2	15000	840	11000	130	640	41
MTI-OC-MT-10	6/5/2007	49000	20	440	53000	180000	2.6	23000	950	15000	150	420	37
MTI-OC-MT-11	6/5/2007	30000	34	310	73000	260000	13	19000	940	8900	120	570	52
MTI-OC-MT-12	6/5/2007	35000	32	490	75000	310000	8.5	18000	900	11000	120	580	41
MTI-SR3-MT-13	6/6/2007	51000	11	420	41000	180000	3.7	22000	1000	16000	160	440	39
MTI-SR3-MT-14	6/6/2007	44000	17	420	73000	220000	4.5	29000	1000	13000	150	540	38
MTI-SR3-MT-15	6/6/2007	68000	6	880	36000	160000	180	21000	800	12000	170	410	80
MTI-SR3-MT-16	6/6/2007	81000	3	340	37000	97000	2.9	36000	810	11000	170	270	56
MTI-SR3-MT-17	6/6/2007	41000	22	380	73000	210000	10	29000	1100	15000	130	490	51
MTI-SR3-MT-18	6/6/2007	47000	8	400	40000	200000	13	21000	970	13000	130	510	62
MTI-SR3-MT-19	6/6/2007	34000	32	440	52000	220000	5.1	18000	720	13000	110	570	33
MTI-SR7-MT-20	6/6/2007	42000	36	580	48000	110000	4.4	18000	1000	17000	150	310	46
MTI-SR7-MT-21	6/6/2007	47000	18	480	48000	280000	5.5	15000	800	12000	170	550	51
MTI-SR7-MT-21 Dup	6/6/2007	47000	19	560	45000	270000	19	15000	940	15000	150	540	59
MTI-SR7-MT-21 Dup	6/7/2007	18000	20	240	39000	330000	8.9	11000	790	7600	76	880	57
MTI-SR7-MT-22	6/6/2007	41000	10	350	54000	230000	2.6	23000	950	12000	120	520	49
MTI-SR7-MT-23	6/6/2007	40000	14	350	53000	180000	15	21000	980	11000	170	510	42
MTI-SR7-MT-24	6/6/2007	46000	22	290	70000	200000	98	21000	830	11000	170	540	120
MTI-SR7-MT-25	6/6/2007	54000	13	390	52000	260000	24	25000	1000	13000	180	640	53

Table 2 - Site-Specific Background Soil Sampling Data

Privileged and Confidential
Prepared at Request of Counsel

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Chemical Name		Aluminum	Arsenic	Barium	Calcium	Iron	Lead	Magnesium	Manganese	Potassium	Strontrium	Vanadium	Zinc
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Sample Date												
Native Soil													
MTI-BG-NS-13-1-13-19-C	6/11/2007	59000	5	410	12000	40000	11	12000	520	17000	120	120	78
MTI-BG-NS-13-2-12-18-C	6/11/2007	68000	3	410	11000	50000	11	14000	1000	17000	120	130	62
MTI-BG-NS-13-3-11-17-C	6/11/2007	60000	3	350	12000	42000	11	11000	520	16000	110	120	75
MTI-BG-NS-13-3-2.5-3.5-A	6/11/2007	53000	9	330	8900	40000	39	10000	430	14000	89	110	62
MTI-BG-NS-13-4-10-16-C	6/11/2007	54000	4	380	13000	36000	12	12000	530	13000	120	100	78
MTI-BG-NS-14-1-12-18-C	6/11/2007	52000	< 2	300	14000	44000	20	9300	690	9800	160	150	77
MTI-BG-NS-14-2-12-18-C	6/11/2007	58000	3	290	20000	47000	9.4	11000	770	11000	190	170	79
MTI-BG-NS-14-3-15-21-C	6/11/2007	50000	< 2	310	12000	33000	13	9700	530	11000	150	130	79
MTI-BG-NS-14-4-9-15-C	6/11/2007	64000	2	330	12000	41000	18	9800	530	11000	160	120	82
MTI-BG-NS-15-1-14-20-C	6/11/2007	54000	8	360	1600	31000	13	6200	970	17000	55	74	74
MTI-BG-NS-15-1-2-10-A2	6/11/2007	42000	4	340	1600	25000	18	4100	1500	13000	56	66	88
MTI-BG-NS-15-2-11-17-C	6/11/2007	47000	5	350	2300	26000	14	5000	920	16000	64	71	75
MTI-BG-NS-15-2-2-10-A2	6/11/2007	52000	5	320	1500	27000	15	4900	1000	14000	53	71	71
MTI-BG-NS-15-3-14-20-C	6/11/2007	53000	5	340	1700	29000	13	5700	780	15000	56	72	69
MTI-BG-NS-15-3-2-10-A2	6/11/2007	48000	5	300	1500	24000	20	4500	1200	13000	50	70	75
MTI-BG-NS-15-4-11-17-C	6/11/2007	48000	3	350	1600	26000	18	4400	980	16000	55	64	73
MTI-BG-NS-15-4-2-10-A2	6/11/2007	56000	6	340	1500	28000	19	4800	1200	14000	50	74	81
MTI-PM-NS-01-C	6/7/2007	43000	7	310	12000	48000	95	7600	670	14000	88	140	51
MTI-OC-NS-10-C	6/8/2007	52000	3	320	6300	28000	10	6800	550	16000	81	73	57
MTI-OC-NS-11-C	6/8/2007	36000	< 2	290	2300	17000	9.9	4500	190	14000	62	54	39
MTI-OC-NS-12-C	6/8/2007	41000	4	310	5500	26000	8.4	4400	270	13000	86	53	46
MTI-OC-NS-12-C Dup	6/8/2007	43000	4	300	4500	29000	7.7	4200	240	14000	82	45	41
MTI-SR3-NS-02-C	6/8/2007	56000	5	360	11000	86000	14	9900	920	15000	93	220	66
MTI-SR3-NS-02-C Dup	6/8/2007	53000	5	330	9900	110000	11	8900	940	14000	80	270	59
MTI-SR3-NS-03-C	6/8/2007	83000	2	210	41000	100000	2.5	34000	1400	8100	190	310	66
MTI-SR3-NS-04-C	6/8/2007	57000	3	350	25000	120000	46	17000	1300	13000	140	330	59
MTI-SR3-NS-05-C	6/8/2007	59000	11	330	31000	230000	70	18000	1200	11000	130	840	160
MTI-SR7-NS-06-C	6/8/2007	49000	6	340	4200	32000	11	7800	540	18000	78	79	48
MTI-SR7-NS-07-C	6/8/2007	51000	2	350	14000	33000	7.7	9000	700	14000	190	100	51
MTI-SR7-NS-08-C	6/8/2007	52000	4	320	5900	32000	11	6600	630	14000	99	76	44
MTI-SR7-NS-09-C	6/8/2007	55000	6	340	8300	38000	36	9000	740	14000	110	89	51
Paint Sludge													
MTI-PSUCOMP	6/14/2007	10000	56	17000	5000	21000	18000	1900	86	350	280	< 1	1500
MTI-PSWCOMP	6/14/2007	7700	16	8800	10000	89000	2300	13000	330	2700	1900	8	4900
Coal and Slag													
MTI-COALCOMP	6/14/2007	14000	6	330	630	3000	98	330	28	1700	45	31	45
MTI-SLAGCOMP	6/14/2007	110000	3	960	8400	88000	13	4400	130	16000	450	170	29

Notes:

< Not detected
mg/kg Milligrams per kilogram

Table 2 - Site-Specific Background Soil Sampling Data

*Privileged and Confidential
Prepared at Request of Counsel*

**Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey**

Chemical Name		Aluminum	Arsenic	Barium	Calcium	Iron	Lead	Magnesium	Manganese	Potassium	Strontrium	Vanadium	Zinc
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Sample Date												
Ore Samples													
MTI-CM-PO4-BULK	6/15/2007	21000	130	110	210000	150000	7.5	1700	300	2600	220	300	14
MTI-DM-GRAN-BULK	6/15/2007	3600	3	16	4400	710000	2.2	1300	300	130	4.3	450	37
MTI-DM-MASS-BULK	6/15/2007	4500	2	19	2700	670000	2.5	1400	430	130	4.3	460	40
MTI-DM-PO4-BULK	6/15/2007	2200	5	26	37000	600000	3.1	1100	180	89	31	450	29
MTI-PM-GRAN-BULK	6/15/2007	2900	7	5.9	5700	480000	0.9	930	170	110	7.3	1200	10
MTI-PM-MASS-BULK	6/15/2007	2500	9	28	20000	680000	1.3	2500	560	120	14	1000	80
MTI-PM-PO4-BULK	6/15/2007	2800	51	17	44000	430000	7	2800	590	180	41	1300	34

Notes:

< Not detected

mg/kg Milligrams per kilogram

Table 2 - Site-Specific Background Soil Sampling Data

Privileged and Confidential
Prepared at Request of Counsel

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Chemical Name		Aluminum	Arsenic	Barium	Calcium	Iron	Lead	Magnesium	Manganese	Potassium	Strontrium	Vanadium	Zinc
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Sample Date												
Mags vs. Non-Mags													
MTI-PM-GRAN-BULK Mags	6/15/2007	700	2	2	280	720000	< 0.3	740	420	37	0.8	1100	18
MTI-PM-GRAN-BULK Non Mags	6/15/2007	1800	9	2.8	7000	360000	0.7	590	64	43	8.7	880	10
MTI-PM-MASS-BULK Mags	6/15/2007	51000	1	2.6	360	710000	< 0.3	1700	650	16	0.7	1100	14
MTI-PM-MASS-BULK Non Mags	6/15/2007	5700	123	150	130000	180000	7.2	3400	140	590	110	550	23
MTI-PM-MT-26 Mags	6/7/2007	1100	1	3.4	360	650000	3.1	920	560	56	1.5	1200	36
MTI-PM-MT-26 Non Mags	6/7/2007	30000	34	320	64000	200000	11	15000	820	11000	120	550	88
MTI-PM-MT-27 Mags	6/7/2007	1000	< 2	2.4	290	660000	2.4	820	510	250	1	1100	23
MTI-PM-MT-27 Non Mags	6/7/2007	13000	13	170	48000	270000	7.8	6800	400	5600	70	690	30
MTI-PM-MT-28 Mags	6/7/2007	990	2	2.6	320	670000	< 0.3	770	510	36	1.3	1000	22
MTI-PM-MT-28 Non Mags	6/7/2007	11000	42	130	48000	180000	2.6	5800	320	4200	58	470	20
MTI-PM-MT-29 Mags	6/7/2007	1100	1	3.3	410	680000	2.8	910	490	56	1.3	1200	110
MTI-PM-MT-29 Non Mags	6/7/2007	19000	33	290	51000	300000	4.4	9800	560	9200	84	790	150
MTI-PM-MT-30 Mags	6/7/2007	960	2	2.3	390	660000	< 0.3	840	470	33	1	1100	21
MTI-PM-MT-30 Non Mags	6/7/2007	14000	29	160	65000	270000	3.5	9300	450	5000	74	700	26
MTI-PM-MT-31 Mags	6/7/2007	980	2	2.5	310	640000	0.6	840	530	46	2.2	1100	24
MTI-PM-MT-31 Non Mags	6/7/2007	33000	50	290	75000	170000	16	22000	1000	10000	130	470	67
MTI-PM-MT-32 Mags	6/7/2007	1400	1	5.1	500	660000	5.1	1200	570	88	1.8	1300	40
MTI-PM-MT-32 Non Mags	6/7/2007	16000	14	240	45000	220000	3.2	8400	470	7200	74	570	28
MTI-PM-MT-33 Mags	6/7/2007	1400	2	5.8	680	690000	5.2	1300	550	99	2.5	1300	40
MTI-PM-MT-33 Non Mags	6/7/2007	39000	40	410	89000	130000	8.2	24000	890	15000	150	330	49
MTI-PM-MT-34 Mags	6/7/2007	1500	2	5.5	550	690000	11	1300	580	100	2.5	1200	39
MTI-PM-MT-34 Non Mags	6/7/2007	45000	32	460	82000	110000	40	24000	930	16000	160	300	78
MTI-PM-MT-35 Mags	6/7/2007	1000	1	3	310	690000	0.9	870	500	50	1.1	1000	27
MTI-PM-MT-35 Non Mags	6/7/2007	16000	14	91	70000	430000	12	7400	950	3100	91	940	64
MTI-PM-MT-36 Mags	6/7/2007	1200	< 2	5.2	520	710000	4.3	960	600	80	1.7	1200	41
MTI-PM-MT-36 Non Mags	6/7/2007	29000	11	320	68000	260000	8.9	14000	750	12000	110	630	67
MTI-PM-MT-37 Mags	6/12/2007	1900	2	8.1	1600	680000	5	1600	440	200	6.5	1100	37
MTI-PM-MT-37 Non Mags	6/12/2007	47000	25	410	75000	98000	6.5	26000	760	17000	150	260	52
MTI-PM-PO4-BULK Mags	6/15/2007	890	2	2.8	430	730000	1.9	740	290	24	1.2	1900	31
MTI-PM-PO4-BULK Non Mags	6/15/2007	3800	81	39	83000	200000	19	4300	820	230	88	820	40
MTI-OC-MT-01 Mags	6/5/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
MTI-OC-MT-01 Non Mags	6/5/2007	36000	90	380	110000	62000	13	24000	940	11000	150	180	61
MTI-OC-MT-02 Mags	6/5/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3

Table 2 - Site-Specific Background Soil Sampling Data

Privileged and Confidential
Prepared at Request of Counsel

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

Chemical Name		Aluminum	Arsenic	Barium	Calcium	Iron	Lead	Magnesium	Manganese	Potassium	Strontrium	Vanadium	Zinc
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Sample Date												
MTI-OC-MT-02 Non Mags	6/5/2007	46000	65	370	78000	76000	22	26000	1100	11000	120	180	86
MTI-OC-MT-03 Mags	6/5/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
MTI-OC-MT-03 Non Mags	6/5/2007	63000	35	380	74000	97000	6.9	47000	1500	14000	120	230	110
MTI-OC-MT-04 Mags	6/5/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
MTI-OC-MT-04 Non Mags	6/5/2007	61000	20	400	74000	110000	5.8	48000	1400	13000	120	280	120
MTI-OC-MT-05 Mags	6/5/2007	1400	2	6.2	700	730000	< 0.3	1100	710	91	2.6	1200	41
MTI-OC-MT-05 Non Mags	6/5/2007	35000	39	360	66000	94000	16	15000	860	8300	120	250	58
MTI-OC-MT-06 Mags	6/5/2007	1500	2	5.4	750	700000	< 0.3	1100	740	85	2.5	1100	37
MTI-OC-MT-06 Non Mags	6/5/2007	39000	49	430	72000	82000	8	16000	900	9500	130	200	65
MTI-OC-MT-07 Mags	6/5/2007	1700	3	6.8	950	750000	2.7	1300	490	110	3.5	1200	30
MTI-OC-MT-07 Non Mags	6/5/2007	41000	62	360	93000	83000	32	24000	900	10000	140	210	55
MTI-OC-MT-08 Mags	6/5/2007	1900	3	8.8	1600	750000	5.5	1500	650	140	5.8	1300	42
MTI-OC-MT-08 Non Mags	6/5/2007	37000	57	420	95000	130000	8	21000	830	9800	140	310	41
MTI-OC-MT-09 Mags	6/5/2007	1500	3	6.2	780	750000	< 0.3	1200	580	93	3.8	1100	33
MTI-OC-MT-09 Non Mags	6/5/2007	48000	14	520	79000	140000	4.5	21000	890	11000	170	340	43
MTI-OC-MT-10 Mags	6/5/2007	1800	4	11	1000	730000	0.8	1300	680	130	3.3	1200	48
MTI-OC-MT-10 Non Mags	6/5/2007	56000	9	510	58000	130000	1.8	25000	850	13000	160	280	41
MTI-OC-MT-11 Mags	6/5/2007	1700	3	11	750	690000	4	1400	600	120	2.8	1200	34
MTI-OC-MT-11 Non Mags	6/5/2007	39000	21	410	108000	120000	11	26000	1100	15000	150	300	60
MTI-OC-MT-12 Mags	6/5/2007	1800	3	7.1	960	730000	6.6	1600	570	120	3.1	1100	37
MTI-OC-MT-12 Non Mags	6/5/2007	47000	51	670	113000	82000	5.8	25000	960	19000	170	220	49
MTI-CM-PO4-BULK Mags	6/15/2007	1400	2	3.8	1500	690000	1.2	700	240	50	7.9	1100	23
MTI-CM-PO4-BULK Non Mags	6/15/2007	29000	179	160	280000	9500	9.9	1900	300	5000	290	78	18
MTI-DM-GRAN-BULK Mags	6/15/2007	2500	2	1.4	83	680000	0.9	600	260	11	0.3	500	48
MTI-DM-GRAN-BULK Non Mags	6/15/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
MTI-DM-MASS-BULK Mags	6/15/2007	3000	1	2.3	92	700000	0.7	640	250	8	0.4	480	38
MTI-DM-MASS-BULK Non Mags	6/15/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
MTI-DM-PO4-Bulk Mags	6/15/2007	1600	1	1.6	220	700000	0.7	400	150	9	0.7	520	33
MTI-DM-PO4-Bulk Non Mags	6/15/2007	1800	33	22	245000	66000	9.9	2000	240	300	240	56	29
MTI-SR3-MT-13 Mags	6/6/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
MTI-SR3-MT-13 Non Mags	6/6/2007	49000	9	420	43000	170000	2.2	22000	840	16000	160	380	41
MTI-SR3-MT-14 Mags	6/6/2007	1800	3	8.4	980	700000	0.5	1300	630	230	4.3	1400	41
MTI-SR3-MT-14 Non Mags	6/6/2007	56000	28	530	77000	110000	1.6	29000	1000	20000	190	270	44
MTI-SR3-MT-15 Mags	6/6/2007	1200	3	37	280	700000	2.9	790	470	110	1.9	2700	31
MTI-SR3-MT-15 Non Mags	6/6/2007	68000	13	550	38000	60000	56	24000	860	18000	170	180	72
MTI-SR3-MT-16 Mags	6/6/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
MTI-SR3-MT-16 Non Mags	6/6/2007	81000	11	340	40000	86000	5.9	38000	840	14000	170	220	64
MTI-SR3-MT-17 Mags	6/6/2007	1600	3	6.3	700	730000	6.6	1300	630	120	2.8	1500	38
MTI-SR3-MT-17 Non Mags	6/6/2007	46000	24	440	83000	120000	11	33000	1100	17000	150	290	56

Table 2 - Site-Specific Background Soil Sampling Data

Privileged and Confidential
Prepared at Request of Counsel

Ringwood Mines/Landfill Superfund Site
Ringwood, New Jersey

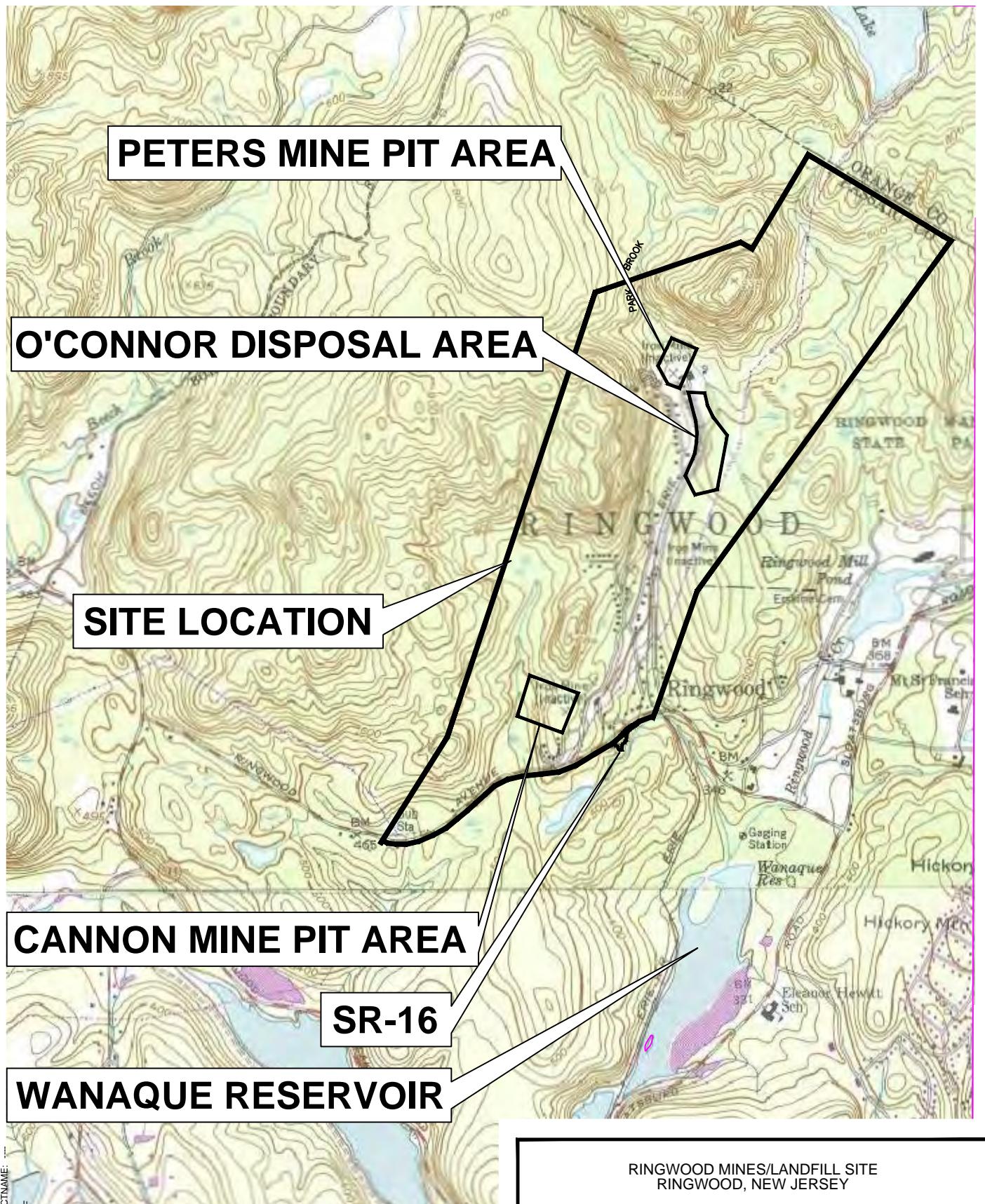
Chemical Name		Aluminum	Arsenic	Barium	Calcium	Iron	Lead	Magnesium	Manganese	Potassium	Strontrium	Vanadium	Zinc
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Sample Date												
MTI-SR3-MT-18 Mags	6/6/2007	1500	2	7.6	520	680000	4.4	830	770	130	5.2	1300	45
MTI-SR3-MT-18 Non Mags	6/6/2007	46000	14	430	38000	96000	15	17000	890	17000	150	300	61
MTI-SR3-MT-19 Mags	6/6/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
MTI-SR3-MT-19 Non Mags	6/6/2007	34000	22	480	53000	200000	5.4	18000	790	15000	120	510	36
MTI-SR7-MT-20 Mags	6/6/2007	1600	2	5.3	790	660000	1.7	1300	760	1000	3.2	1300	46
MTI-SR7-MT-20 Non Mags	6/6/2007	52000	23	600	51000	81000	17	21000	840	19000	170	220	49
MTI-SR7-MT-21 Mags	6/6/2007	1400	1	6.1	660	670000	1.7	1100	530	130	5.9	1100	27
MTI-SR7-MT-21 Non Mags	6/6/2007	55000	32	660	65000	82000	7.9	16000	870	18000	220	240	49
MTI-SR7-MT-21 Mags Dup	6/6/2007	1400	2	5.5	630	630000	5.9	1000	540	180	6.9	1100	36
MTI-SR7-MT-21 Non Mags Dup	6/6/2007	57000	34	730	60000	76000	22	16000	900	20000	200	230	73
MTI-SR7-MT-21 Mags Dup	6/7/2007	1200	1	4.5	530	700000	5.6	980	610	69	1.8	1200	49
MTI-SR7-MT-21 Non Mags Dup	6/7/2007	30000	29	340	69000	240000	9.2	15000	760	12000	110	570	78
MTI-SR7-MT-22 Mags	6/6/2007	1300	2	5.1	600	680000	0.6	1000	640	130	2.3	1100	36
MTI-SR7-MT-22 Non Mags	6/6/2007	45000	23	400	60000	130000	3.4	23000	880	15000	170	350	55
MTI-SR7-MT-23 Mags	6/6/2007	1500	2	8.7	800	630000	4.8	1100	540	180	3.4	1400	33
MTI-SR7-MT-23 Non Mags	6/6/2007	56000	16	530	67000	88000	14	27000	950	20000	210	270	47
MTI-SR7-MT-24 Mags	6/6/2007	1300	1	7	580	660000	17	800	500	140	2.5	1600	61
MTI-SR7-MT-24 Non Mags	6/6/2007	48000	30	410	69000	97000	92	23000	850	16000	190	290	140
MTI-SR7-MT-25 Mags	6/6/2007	1500	< 2	7.4	560	650000	8.5	1000	610	170	2.7	1700	40
MTI-SR7-MT-25 Non Mags	6/6/2007	52000	17	460	55000	110000	29	26000	920	18000	190	320	64
Combined OC Mine Slime Tails Mags	6/5/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
Combined OC Mine Slime Tails Non Mags	6/5/2007	62000	30	410	72000	110000	8.9	47000	1400	18000	110	290	110
Combined OC Mine Tails Mags	6/5/2007	1300	1	6.9	920	670000	5.1	1300	610	140	3.5	1200	44
Combined OC Mine Tails Non Mags	6/5/2007	41000	50	450	83000	120000	12	22000	910	14000	140	310	52
Combined Peters' Mine Tails Mags	6/7/2007	870	2	3.7	480	700000	2.8	950	560	67	1.7	1200	49
Combined Peters' Mine Tails Non Mags	6/7/2007	29000	43	310	67000	220000	11	14000	700	10000	110	550	56
Combined PM Bene Ore Tails Mags	6/15/2007	710	1	3.5	420	670000	1.6	850	550	56	1.4	1100	31
Combined PM Bene Ore Tails Non Mags	6/15/2007	26000	41	300	69000	230000	6.7	15000	810	10000	100	640	58
Combined SR3 Mine Tails Mags	6/6/2007	< 6	< 2	< 0.2	< 5	< 4	< 0.3	< 2	< 0.1	< 3	< 0.1	< 4	< 0.3
Combined SR3 Mine Tails Non Mags	6/6/2007	55000	29	460	52000	120000	12	26000	880	16000	150	300	56
Combined SR7 Mine Tails Mags	6/6/2007	1400	1	7.1	700	680000	5.4	1000	600	160	4.3	1400	41
Combined SR7 Mine Tails Non Mags	6/6/2007	55000	21	500	64000	110000	28	25000	890	18000	180	290	62

Notes:

< Not detected

mg/kg Milligrams per kilogram

Figures



PROJECT NAME: ...
IMAGE: 0604X01.jpg
GREENWOOD-NJ.tif
Ring001.jpg

REFERENCE: WANAQUE, NJ AND GREENWOOD
LAKE, NY-NJ, USGS QUADRANGLE, 7.5 MINUTE
SERIES, 1995 AND 1954.

0 2000
SCALE IN FEET

LEGEND:

SITE BOUNDARY

RINGWOOD MINES/LANDFILL SITE
RINGWOOD, NEW JERSEY

SITE LOCATION

ARCADIS

FIGURE
1



LEGEND:

- LOT GRID LINES
- LEVEL 1 RECON SURVEY COMPLETED 4/28/14
- LEVEL 2 RECON SURVEY COMPLETED 5/9/14
- NO ACCESS

0 450 900
GRAPHIC SCALE Feet

RINGWOOD MINES/LANDFILL SITE
RINGWOOD, NEW JERSEY

STUDY AREA

 **ARCADIS**

- NOTES:
1. 2012 AERIAL IMAGE,
NEW JERSEY GEOGRAPHIC INFORMATION NETWORK
 2. LOT NUMBERS ARE INCLUDED IN PARENTHESES;
ALL LOTS ARE IN BLOCK 508

